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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,203

05/11/2007

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EXAMINER

BOYKIN, TERRESSA M

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

08/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,203	Applicant(s) VANDAELE, HUGO	
	Examiner Terressa M. Boykin	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 112

Claims 17- 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is recognized by the examiner that the original claims have been cancelled. However, the claims now presented appear to change the scope of the crux of the invention and it is not certain whether the language now used can be supported by the specification as originally written. Note for example the applicants recited a step c) a flow control valve in the outlet line...." which was originally expressed in the original claims a measuring valve or rate control means. This change in wording may deviate or cause the specification to no longer be supportive of the claims now presented. applicants must verify and indicate where such newly used language is supported. It should be noted that not only should support be set forth and identified for the wording of the limitations or any additional matter but the context to which the limitation applies should be the same. In order to expedite prosecution of the case, an additional search will be performed in the event that appropriate support is identified while applicants are given an opportunity to clarify and identify the page and line the supporting limitations if such do exist. Applicants newly presented claimed language appears to be new matter since even if the "exact wording" may be found in the specification, the context upon which it appears to be directed is changed.

Further it is not clear whether the deletions (cancelled claims 1-16) of the matter have now changed the scope of the original invention in that the claims appear to be broader in scope and thus may not be fully supported.

2163.06 Relationship of Written Description Requirement to New Matter

Lack of written description is an issue that generally arises with respect to the subject matter of a claim. If an applicant amends or attempts to amend the abstract, specification or drawings of an application, an issue of new matter will arise if the content of the amendment is not described in the application as filed. Stated another way, information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter.

There are two statutory provisions that prohibit the introduction of new matter: 35 U.S.C. 132 - No amendment shall introduce new matter into the disclosure of the invention; and, similarly providing for a reissue application, 35 U.S.C. 251 - No new matter shall be introduced into the application for reissue.

III. CLAIMED SUBJECT MATTER NOT DISCLOSED IN REMAINDER OF SPECIFICATION

The claims as filed in the original specification are part of the disclosure and therefore, if an application as originally filed contains a claim disclosing material not disclosed in the remainder of the specification, the applicant may amend the specification to include the claimed subject matter. *In re Benno*, 768 F.2d 1340, 226 USPQ 683 (Fed. Cir. 1985). Form Paragraph 7.44 may be used where originally claimed subject matter lacks proper antecedent basis in the specification. See MPEP 608.01(o).

Claim Rejections - 35 USC § 102 /103

The following is a quotation of the appropriate paragraphs of 35 U.S.C.

102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United

States.

Claims 17-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over USP 6566460 see abstract, figure 3 and example 3.

USP 6566460 discloses an apparatus and method for continuously removing polymer from a pressurized loop olefin polymerization reactor containing a slurry of polymer particles and fluids. The slurry is continuously discharged from polymer-rich zones of the reactor and enters one or a series of non-cyclonic flash vessels, in which the particles separate from the fluid. The flash vessel has a conical bottom in which a minimum level of polymer is maintained for a dynamic seal between the inlet and outlet.

Multiple-stage Flash

An alternate embodiment described below is similar to that in Example 2 but with the inclusion of an intermediate flash vessel to let down the pressure in two stages.

Referring to FIG. 3,

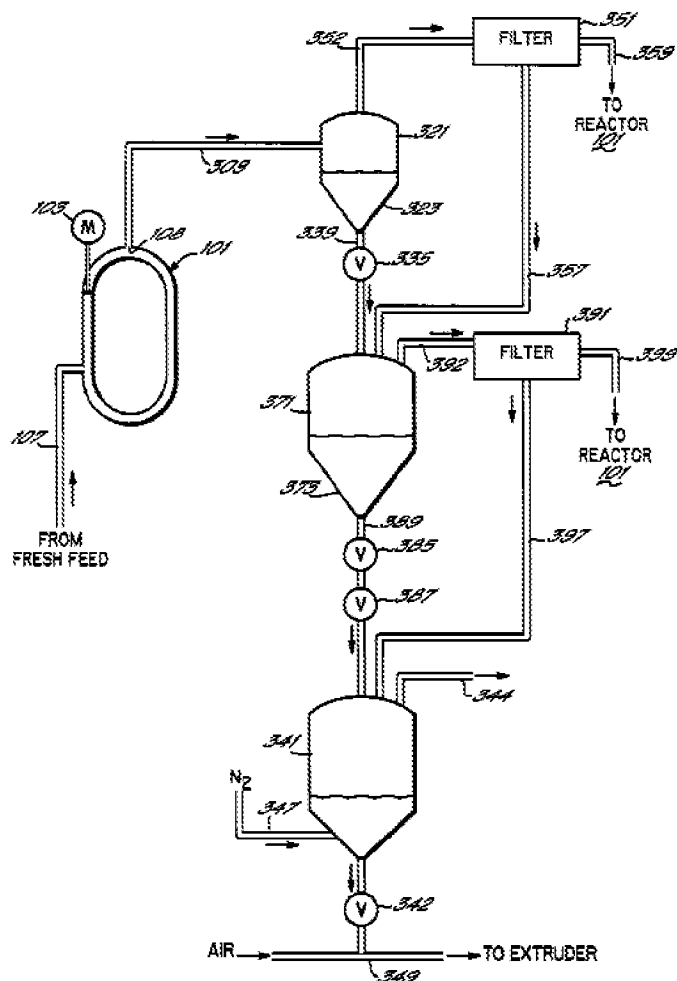


FIG. 3

the reactor operation and slurry take-off are as described in Examples 1 and 2. The slurry enters high-pressure non-cyclonic flash vessel 321 where the pressure is approximately 220 psig. An overhead stream consisting of ethylene, isobutane and lights exits via line 352 through bag filter 351 to remove any entrained polymer particles, continues through line 359 and is cooled and liquefied in a heat exchanger (not shown). A portion of lights can be vented before the stream is pumped back to the reactor; no compressor is needed. Vessel 321 can be about six feet in diameter and ten feet high,

tangent to tangent. Polymer powder accumulates in lower section 323 which is conical at an angle of at least about 60 degrees. Control of rotary valve 335 in line 339 in response to a minimum level of polymer powder in vessel 321 provides a dynamic seal between vessel 321 and downstream vessels, similar to that described in Example 2. A substitute for rotary valve 335 could be two ball valve in series operated out of phase.

In view of the above, there appears to be no significant difference between the reference and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional and inherent. Any properties or characteristics inherent in the prior art, e.g. the type of measuring or sensing employed for the particular function one would desire to monitor. Thus, each reference containing such a monitoring device of some type would still anticipate the claimed invention. Note In re Swinehart, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things to distinguish over the prior art". Since the disclosed monitoring device or measuring valves are expressed differently and thus yet appear to be inherent may be distinct from those claimed, it is incumbent upon applicant(s) to establish that they are in fact different and whether such difference is unobvious.

Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

Claims 17-21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 0415427 see column 5 line 24 through col. 4 line 2 and figure 1; or USP 3152872 col. 3 line 24 – col. 4 line 2 and figure 1; or USP 6319997" see abstract, figure 1 and claims.

EP 0415427 discloses a process for recovering solid polymer from a slurry of polymer and diluents produced in a conventional polymerization plant, employs a flash line heater in conjunction with an intermittently exhausted polymer settling leg. The flash line heater consists of a steam heated double pipe heat exchanger. Flow of slurry through the heater is constricted so that flow time is at least 25% of the interval between operations of the settling leg.

Specifically, the polymerization plant consists essentially of a loop reactor into which is fed monomer, diluents, and catalyst via ports respectively. The polymerization mixture is circulated by an agitator. As polymerization progresses, polymer slurry accumulates in the settling leg. Periodically, a product takeoff port is opened to admit slurry to a conduit (19) whence it is conducted to a steam heated double pipe flash heater (21) where the slurry is heated typically to 170 deg. before passing to a conventional flash chamber (20) where the slurry is separated into polymer and vaporized diluents. The polymer proceeds through conduit (28) for further conventional treatment. Flow time in the heater (21) is controlled by the heater pipe diameter, preferably of 0.75-2.0 inches. The ratio of cross-sectional areas of settling leg to pipe is preferably 4-25, resulting in a heater flow time preferably of 40-70% of the time between closing and opening of the PTO port.

The process provides more efficient heat exchange and is more compact than flash heaters of the prior art.

USP 3152872 discloses a method and apparatus for separating solid polymer and liquid diluents from a mixture of these materials. In another and more specific aspect the invention relates to a method and apparatus for separating solid polymer from liquid diluents, drying the polymer and recovering the diluents for reuse in a polymerization process. The method and apparatus are for separating polymer solids from liquid hydrocarbon diluents which comprises evaporating the diluents from the mixture in a flash zone thereby forming a stream of polymer solids carrying residual diluents, passing the solids through a seal of hydrocarbon gas to a drying zone, contacting the solids with noncombustible gas in the drying zone thereby evaporating residual hydrocarbon diluents from the solids, and then conveying the thus dried polymer solids to a subsequent operation. The seal of hydrocarbon gas through which the solids are passed from the flash chamber to the drying zone prevents the noncombustible gas that is used to strip residual diluents from the solids from entering the flash chamber and contaminating the flashed diluents vapors. In this manner any readily available noncombustible gas, such as carbon dioxide or mixtures of carbon dioxide, and nitrogen, can be employed to strip residual hydrocarbon ,from the polymer solids. The polymer thus dried can safely be introduced to a dryer or conveying system using air. The apparatus of includes a flash chamber, means for feeding the slurry of the polymer in liquid hydrocarbon to this chamber, a dryer, a conveyor connected to the lower portion of the flash chamber, a connecting conduit between said conveyor and said dryer, means for introducing hydrocarbon gas to said connecting conduit, means for

introducing noncombustible gas to said dryer, and means for withdrawing noncombustible gas plus vaporized hydrocarbon from said dryer.

USP 6319997 discloses an apparatus and process for producing polymer from a polymerization slurry in a loop reactor operating at a space time yield greater than 2.8 lbs/hr-gal. In this instance, the polymer is formed in the polymerization slurry which includes a liquid medium and solids. The polymerization slurry is discharged into a first transfer conduit. The polymerization slurry is referred to as a polymerization effluent upon leaving the loop reactor. The polymerization effluent is heated in the first transfer conduit to a temperature below the fusion temperature of the polymer solids. The heated polymerization effluent is communicated through said first transfer conduit to a first flash tank. In the first flash tank, from about 50% to about 100% of the liquid medium is vaporized. The vapor is condensed by heat exchange. Polymer solids are discharge from the first flash tank to a second flash tank through a seal chamber of sufficient dimension such as to maintain a volume of polymer solids in the said seal chamber sufficient to maintain a pressure seal. The polymer solids are then communicated to a second flash tank. In the second flash tank, the polymer solids are exposed to a pressure reduction from a higher pressure in the first flash tank to a lower pressure in said second flash. The polymer solids are then discharging from said second flash tank. Additionally, the weight percent of solids in the polymerization slurry may be greater than 47. The loop reactor may be operated at a total recirculating pumping head/reactor distance of greater than 0.15 ft/ft. The loop reactor may also be operated with a recirculating pumping head greater than or equal to 200 ft. and have

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more than eight vertical legs, desirably between 10 and 16 vertical legs, more desirably between 10 and 12 vertical legs, most desirably 12 vertical legs. The volume of polymerization slurry in the loop reactor may be greater than 20,000 gallon.

In view of the above, there appears to be no significant difference between the references and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional and inherent. Any properties or characteristics inherent in the prior art, e.g. the type of measuring or sensing employed for the particular function one would desire to monitor. Thus, each reference containing such a monitoring device of some type would still anticipate the claimed invention. Note In re Swinehart, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things to distinguish over the prior art". Since the disclosed monitoring device or measuring valves are expressed differently and thus appear to be inherent, it is incumbent upon applicant(s) to establish that they are in fact different and whether such difference is unobvious.

Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terressa Boykin whose telephone number is (571)

272- 1069 . The examiner can normally be reached at (571) 272-0580 on Monday through Friday from 9:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck , can be reached at (571) 272- 1078 . The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Terressa M. Boykin/
Primary Examiner, Art Unit 1796**